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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,912	08/20/2001	Tao Chen	010501	7750

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QUALCOMM, INC
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EXAMINER

JUNTIMA, NITTAYA

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/933,912	Applicant(s) CHEN ET AL.	
	Examiner Nittaya Juntima	Art Unit 2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 35-56 is/are pending in the application.
 4a) Of the above claim(s) 25-32 and 57-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 35-56 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/29/02, 7/25/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because:

- in Fig. 4, the BLOCK ENCODER currently labeled numerically as “404” should be relabeled as “406,” see the specification on page 12, paragraph 1044, line 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

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- On page 1, line 1, the status of the cited application needs to be updated.
- On page 12, paragraph 1044, line 3, "decoder" needs to be changed to "encoder;"
lines 7, 8, and 14, "504(1) needs to be changed to "504;"
line 12, "504(4) needs to be changed to "504.
- On page 12, paragraph 1045, line 6, "504(4) needs to be changed to "504."
- On page 13 paragraph 1046, line 5, "decoder" needs to be changed to "encoder."
- On page 14, paragraph 1049, line 6, "(not shown)" needs to be changed to "416."
- On page 17, line 1 and paragraph 1056, line 5, on page 19, line 8, and on page 23,
paragraph 1067, line 10, the serial number of the cited co-pending application needs to be updated.

- On page 18, the last line, "P₃" needs to be changed to "P₂."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 and 33-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the preamble calls for a method for reducing power consumption of a subscriber station, however, the claim body contains only the determining and terminating steps.

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One cannot determine from the claim body how the power consumption of a subscriber station would be reduced based on these method steps since there is no correlation between the power consumption of a subscriber station and these method steps. Therefore, the claim is vague and indefinite.

In claim 10, the preamble calls for a method for performing hard handoff on a common broadcast channel and the claim body includes a step for determining a need for handoff. However, the claim body does not contain any actual step(s) that relates to how or when the hard handoff is performed. Further, there is no linkage/correlation between the frames in the determining step and the frames in the receiving step; it cannot be determined if they are the same frames. How the frames associated with the hard handoff? Therefore, the claim is vague and indefinite.

In claim 20, the preamble calls for a method for a handoff, however, the claim body does not contain any step relates to a handoff being performed. Further, there is no linkage/correlation between the determining a number of frames and terminating steps and the rest of the method steps; it cannot be determined how the determining a number of frames and terminating steps are associated with the handoff and the rest of the method steps. Therefore, the claim is vague and indefinite.

Claim 33 is an apparatus claim corresponding to method claim 1, therefore is rejected under the same reason set forth in the rejection of claim 1.

Claim 42 is an apparatus claim corresponding to method claim 10, therefore is rejected under the same reason set forth in the rejection of claim 10. Further, there is no linkage/correlation between the frames in line 11 of the claim and the frames in line 6; it cannot

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be determined if those frames are the same frames received by the subscriber station and how the frames are associated with the hard handoff. Therefore, the claim is vague and indefinite.

Claim 52 is an apparatus claim corresponding to method claim 20, therefore is rejected under the same reason set forth in the rejection of claim 20. Further, there is no linkage/correlation between “determine a number of frames..” and “cause the subscriber station to terminate reception of the frames..” and the rest of the method steps; it cannot be determined how the determining and terminating are associated with the handoff and the rest of the actions caused by the claimed instructions. Therefore, the claim is vague and indefinite.

In claims 14-15, “said determined amount of redundancy” lacks antecedent basis. The office is treating the claims as they are dependent on claim 11.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4-7, 9, 33-34, 36-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. (“Fisher”) (USPN 6,012,159).

Regarding claim 1, Fisher teaches a method comprising:

Determining a number of frames that must be received correctly (the receiving side determines that k packets are received correctly, col. 9, lines 53-col. 10, line 1, and 30-35).

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Fisher does not explicitly teach terminating reception of the frames when said determined number of frames was received correctly.

However, since Fisher further teaches that there is no need for decoding the last k-n packets when the first k packets are received correctly; in other words, the last k-n packets can be ignored (col. 9, lines 53-56 and col. 10, lines 30-35), it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fisher to include terminating reception of the frames when said determined number of frames was received correctly as recited in the claim. The suggestion/motivation to do so would have been to ignore and not decode the last k-n packets since whether they are received correctly is immaterial as suggested by Fisher (col. 9, lines 53-56 and col. 10, lines 30-35).

Regarding claims 2 and 34, Fisher further teaches that the n transmitted packets are encoded at the bit level using standard EDAC encoding schemes which provide redundant data bits to the data (col. 3, lines 1-11, col. 7, lines 18-30) and at the receiving end, the n packets are decoded (col. 7, lines 31-36), therefore, it is inherent that determining an amount of redundancy and determining the number of frames that must be received correctly in accordance with the determined amount of redundancy must be included in order for the receiving end to determine that there is no need to further decode the last k-n packets when the first k packets are received correctly (col. 9, lines 53-56).

Regarding claims 4, 7, 36, and 39, Fisher further teaches that the n transmitted packets are encoded at the bit level using standard EDAC encoding schemes which provide redundant data bits to the data (col. 3, lines 1-11, col. 7, lines 18-30) and at the receiving end, the n packets are decoded (col. 7, lines 31-36), therefore, it is inherent that determining an encoding rate of

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received frames in accordance with the received frames and determining the amount of redundancy in accordance with the determined amount of redundancy must be included in order for the receiving end to determine that there is no need to further decode the last k-n packets when the first k packets are received correctly (col. 9, lines 53-56).

Regarding claims 5 and 37, Fisher teaches that if k number of packets are received correctly, there is no need to received the last therefore, therefore, determining a minimum number (one) of frames that must be received correctly must be included (col. 9, lines 53-56 and col. 10, lines 30-35).

Regarding claims 6 and 38, it is inherent that increasing the determined minimum number of frames that must be received correctly by a first number (one) must be included (since the receiving side has to receive the first k packets correctly and k is greater than one, and one packet is being received at a time, col. 9, lines 53-56, therefore, the minimum number of correctly received packets must be increased by one at a time).

Regarding claims 9 and 41, Fisher does not explicitly teach terminating reception of the frames when said determined number of frames was received correctly and a time during which the subscriber station is obligated to receive the frames expired.

However, since Fisher further teaches that there is no need for the receiving side to decode the last k-n packets when the first k packets are received correctly; in other words, the last k-n packets can be ignored (col. 9, lines 53-56 and col. 10, lines 30-35), it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fisher to include terminating reception of the frames when said determined number of frames was received correctly as recited in the claim and a time during which the subscriber station is

obligated to receive the frames expired. The suggestion/motivation to do so would have been to enable the receiving side to ignore and not decode the last $k-n$ packets since whether they are received correctly is immaterial as suggested by Fisher (col. 9, lines 53-56 and col. 10, lines 30-35).

Claim 33 is an apparatus claim corresponding to method claim 1, therefore is rejected under the same reason set forth in the rejection of claim 1. In addition, the apparatus (the receiving end) must include a processor and a storage medium comprising a set of instructions executable by the processor in order for the apparatus to process the receiving packets (col. 9, lines 53-56).

Claims 3, 8, 35, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al. ("Fisher") (USPN 6,012,159) in view of Li (USPN 5,537,410).

Regarding claim 3, 8, 35 and 40, although Fisher further teaches that the n transmitted packets are encoded at the bit level using standard EDAC encoding schemes which provide redundant data bits to the data (col. 3, lines 1-11, col. 7, lines 18-30) and at the receiving end, the n packets are decoded (col. 7, lines 31-36), Fisher fails to teach providing the amount of redundancy and an encoding rate of received frames independently of the received frames.

However, Li teaches informing the receiving end of the data rate (thereby includes the encoding rate and the amount of redundancy) a frame to be received independently of the frame to be received (as shown in Fig. 4 and in the Abstract, lines 1-6, the data rate of the next frame is indicated in the current frame, therefore, the redundancy and encoding rate of the next frame is provided independently of the next frame).

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Given the teaching of Li, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Fisher to include the teaching of Li such that providing the amount of redundancy and an encoding rate of received frames independently of the received frames would be included. The suggestion/motivation to do so would have been to reduce the processing load of the receiving end as suggested by Li (see lines 1-6 of the Abstract).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
December 19, 2005

NJ



RICKY Q. NGO
SUPERVISORY PATENT EXAMINER